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October 24, 2001

TO: Commissioners and Interested Persons

FROM: Peter Douglas, Executive Director
Mark Delaplaine, Federal Consistency Supervisor

SUBJECT: Navy compliance with commitments made during Commission review of radar facilities at the Surface Warfare Engineering Facility (SWEF), Naval Base Ventura County, Port Hueneme

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I. BACKGROUND:

On April 14, 2000, the Commission objected to Consistency Determination CD-4-00 (Navy, Virtual Test Capability, Port Hueneme) and 3 negative determinations[1] for radar facilities at the Surface Warfare Engineering Facility (SWEF) in Port Hueneme (Exhibit 1). The Commission's action took place after a lengthy series of negotiations between the Navy and the Commission, which were facilitated by an independent panel of technical experts convened by the Office of Ocean and Coastal Resource Management (OCRM) to advise the Commission. The Commission's findings on CD-4-00 included the following summary by OCRM of the conclusions of the expert panel members:

> *General Summary - The panel members found that the operation of the SWEF, including its radiofrequency emissions, in accordance with the Navy's described operational and safety guidelines, do not, generally, pose impacts to any land or water use or natural resource of the coastal zone and do not represent a public health risk. Some of the panel members stated that there may be health or exposure risks to people on vessels transiting or anchoring in the harbor. Most of the panel members recommended steps the Navy can, or should, take to further ensure that the operation of the SWEF is safe, that the Navy's operational and safety guidelines are carefully*

1 ND-26-98, ND-52-98, and ND-10-99: Four Radar Systems: (1) Fire Control System (FCS) MK 99; (2) AN/SPQ-9B Surface Search Radar; (3) AEGIS AN/SPY-1A Antenna Array; and (4) AN/SAY-1 Thermal Imaging Sensor System (TISS) (ND-26-98); MK 74 Radar System (ND-52-98); and MK 78 Mod 1 Director (ND-10-99).

> *adhered to and monitored and that radiofrequency measurements in the uncontrolled (off-base) environment are adequate to continue to assess the impact of the radiofrequency emissions.* [Emphasis in original]

Many of the steps recommended by the panel were agreed to by the Navy (see Exhibits 2-3). Nevertheless, the Commission ultimately objected to the consistency and negative determinations, because the Navy would not agree, as had been recommended by one of the expert panel reviewers, that the Navy designate a "non-DOD [Department of Defense] person" as part of the survey team. The Commission expressed its belief that having such a person on the survey team would be essential to maintaining the objectivity of the survey panel and any conclusions it reached as to the effects of radar facilities on coastal zone resources.

The Commission also noted procedurally in its objection that the Navy was not prohibited from proceeding to implement the VTC and other radar improvements, but that if the Navy intended to proceed in the face of an objection the Navy was obligated to so inform the Commission in accordance with Section (a)(i) of Chapter 11 of the California Coastal Management Program (CCMP), which provides:

> *If the Coastal Commission finds that the Federal activity or development project directly affects the coastal zone and is not consistent with the management program, and the federal agency disagrees and decides to go forward with the action, it will be expected to (a) advise the Coastal Commission in writing that the action is consistent, to the maximum extent practicable, with the coastal management program, and (b) set forth in detail the reasons for its decision. In the event the Coastal Commission seriously disagrees with the Federal agency's consistency determination, it may request that the Secretary of Commerce seek to mediate the serious disagreement as provided by Section 307(h) of the CZMA, or it may seek judicial review of the dispute.*[2]

On April 13, 2000, the Navy complied with this provision by informing the Commission of 1) its position that the CZMA did not obligate the Navy include a non-DOD official on the survey teams because the other commitments that the Navy stated it was willing to make and comply with are sufficient to make the operation of the SWEF fully consistent with the enforceable policies of the CCMP, and 2) its intention to proceed with the activities described in the consistency determinations and the negative determinations notwithstanding the Commission's objection thereto (Exhibit 3). The commitments with which the Navy stated it intended to comply are summarized in this excerpt from the Commission's findings on CD-4-00:

> *The Navy's commitments in response are attached as Appendix A (pages 24-25 [Exhibit 2]), with additional commitments and clarifications made during the April 11, 2000, public hearing attached as Appendix B (Navy's letter to the Commission dated April 13, 2000 [Exhibit 3]). With some changes, the Navy has responded positively to several of the recommendations. One example of a change that, rather than have a*

2 This requirement has now been codified at 15 CFR § 930.43(e), which took effect on January 8, 2001.

> *"non-DOD RFR measurement expert participate fully in the survey and the writing of the final report submitted to the public," the Navy has agreed to expand on the surveys and their communication to the public, but not to the extent of designating a "non-DOD measurement expert" as part of the survey team. Also, the Navy has not agreed to perform a "well-designed, comprehensive public exposure assessment study," but rather has chosen to address this recommendation by improving the existing Radhaz surveys, including doubling the measurement points taken in public (uncontrolled) areas, "translating" the survey results into plain English, and appointing an information officer to answer any questions about the surveys.*
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> *Additional Navy commitments include that the Navy will continue to test all radar facilities, submit test results to the Commission staff, and coordinate radar modifications at the SWEF with the Commission staff, including, where appropriate, submittal of future consistency or negative determinations for operational or equipment changes at the facility. For its analysis of future changes, as the Navy has agreed (see Appendix B [Exhibit 3]) the Commission staff will rely for its baseline description and level of impacts on the Navy's "Technical Parameters for SWEF emitters," dated February 18, 2000* [Exhibit 8], *which was the baseline relied upon by the expert panel, as well as the "to scale" map submitted by the Navy to the panel dated January 13, 2000. The Navy will measure and report not only any exceedances of the legally applicable "DOD standards," but will also provide sufficient information (including actual radar logs) to enable a determination of any exceedance in public areas of the "FCC guideline" (currently 1 mW/ cm^2) cited by two of the panel members as an appropriate guideline for public areas.*

The Commission did not take any further action to challenge the Navy's position.

At the Commission's April 12, 2001, meeting, The Beacon Foundation presented information to the Commission asserting that the Navy had not fully complied with these commitments. The Beacon Foundation followed this up with letters dated April 27, 2001, and May 18, 2001. The Navy responded to several of these contentions in a letter dated April 13, 2000, and in subsequent email communications dated July 24, 2001 (to which The Beacon Foundation responded in a letter dated July 28, 2001), and August 8, 2001. These communications were discussed at the August 2001 Commission meeting, at the conclusion of which the staff agreed to provide a more extensive analysis and provide the Commission with possible actions or positions it could adopt if it believed the Navy was not properly following its commitments. The Beacon Foundation and Navy letters and communications are attached (Exhibits 4-7 and 10-13) and are summarized where relevant in the staff's commitment-by-commitment discussion in Section III below.

II. <u>PROCEDURES</u>:

The federal consistency regulations (15 CFR § 930.45) provide:

> ***§930.45 Availability of mediation for previously reviewed activities.***
>
> *(a) Federal and State agencies shall cooperate in their efforts to monitor federally approved activities in order to make certain that such activities continue to be undertaken in a manner consistent to the maximum extent practicable with the enforceable policies of the management program.*
>
> *(b) The State agency may request that the Federal agency take appropriate remedial action following a serious disagreement resulting from a Federal agency activity, including those activities where the State agency's concurrence was presumed, which was: (1) Previously determined to be consistent to the maximum extent practicable with the management program, but which the State agency later maintains is being conducted or is having an effect on any coastal use or resource substantially different than originally described and, as a result, is no longer consistent to the maximum extent practicable with the enforceable policies of the management program; or (2) Previously determined not to be a Federal agency activity affecting any coastal use or resource, but which the State agency later maintains is being conducted or is having an effect on any coastal use or resource substantially different than originally described and, as a result, the activity affects any coastal use or resource and is not consistent to the maximum extent practicable with the enforceable policies of the management program. The State agency's request shall include supporting information and a proposal for recommended remedial action.*
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> *(c) If, after a reasonable time following a request for remedial action, the State agency still maintains that a serious disagreement exists, either party may request the Secretarial mediation or OCRM mediation services provided for in Subpart G of this part.*

Normally when the Commission believes a federal agency is deviating from its commitments for a previously reviewed activity, the Commission relies on the "reopener" provision contained in Section 930.45(b) above. Subpart (b) applies to situations where the state agency has originally *concurred* with the federal agency's activity, but subsequently believes the federal agency is conducting its activity in a manner "having an effect on any coastal use or resource substantially different than originally described and, as a result, is no longer consistent to the maximum extent practicable with the enforceable policies of the management program." In the present situation, by contrast, the Commission did not concur, but rather objected to the federal agency's proposal. Therefore, that procedure is not applicable to this situation.

The applicable regulation for this situation is subpart (a), which contemplates state and federal agency *cooperation* in order to "make certain" that federal activities "continue to be undertaken in a manner consistent…with the enforceable policies of the management program." Even though the Navy and the Commission did not completely agree on the necessary measures to achieve compliance with the CCMP, as discussed on page 2-3, the Navy nevertheless agreed to comply with the commitments it made during the review process. The

following discussion analyzes the degree to which the Navy has complied with these commitments, the consequences of any non-compliance, and the extent to which the Navy has agreed to improve future compliance. This discussion is followed by staff recommendations for further measures that may be appropriate to assure the Navy is cooperating sufficiently in order to make certain that the Navy's activities at the SWEF continue to be undertaken in a manner consistent to the maximum extent practicable with the enforceable policies of the CCMP.

III. NAVY COMPLIANCE

Navy Commitment 1. **The Navy will install a video camera and eliminate radar emissions when large/tall vessels are in the exclusion zone** (the shipping channel in front (seaward) of the SWEF) (Exhibit 14). When a vessel is in this zone, the Navy will not radiate any SWEF radar that has a RF hazard zone that extends beyond the internal Navy fence. All systems' Standard Operating Procedures (SOPs) will be modified to include the monitoring and vessel exclusion procedures. These procedures will also be used for future radars at SWEF. The Navy will also use the video camera to monitor bird use; if a bird is roosting in front of any radar, the Navy will take appropriate action, including eliminating birds and stopping active radar emissions until the problem is solved.

Beacon Foundation comments. The Navy has "defaulted" on commitments to show times it ceased radiating either because of roosting birds or ships in the exclusion zone. The SOP the Navy provided to The Beacon Foundation reflects no modification of SOPs based on Navy commitments and does not mention any tall vessel exclusion procedures or zone.

Navy comments. The Navy installed a video camera and monitored tall vessels entering the harbor. The Navy's February 9, 2001, letter to the Commission, contained the RF Safety Officer's certification that the SWEF emitters were operated in compliance with the SOPs, the Department of Defense (DoD) guidelines and all other operational enhancements agreed to as a result of the informal mediation between the Navy and the Commission.

Information concerning the number of times radiation was interrupted due to roosting birds or of ships in the tall ship exclusion zone was provided in the Summary Matrix of SWEF radiate times for calendar year 2000 submitted via letter dated February 2, 2001. The Summary Matrix documents that there were zero instances of operations being halted due to roosting birds and 1 time when the SWEF emitters were shut off while a ship was in the exclusion zone.

In response to The Beacon Foundation statement concerning SOPs it received under a Freedom of Information Act request, the SOP will be revised to incorporated changes the Navy has agreed to. Until that time, the operators are trained to refer to "change pages."

Commission staff analysis. The Navy has complied with the commitment to install a video camera, cease exposures to tall ships, and report the number of times it ceased operations. The staff has no evidence to suggest the Navy has not complied with these commitments.

Navy Commitment 2. The Navy will **expand on the RadHaz surveys**; improvements include doubling the measurement points taken in public (uncontrolled) areas, "translating" the survey results into plain English, indicating maximum and minimum readings at the Navy fence line, and directing all radars capable of simultaneous operation oriented (as allowed) toward the measurement point. The Navy will measure and report not only any exceedances of the legally applicable "DOD standards," but will also provide sufficient information (including actual radar logs) to enable a determination of any exceedance in public areas of the "FCC guideline" (currently 1 mW/cm^2). The Navy will also appoint an information officer to answer any questions about the surveys.

Beacon Foundation comments The Navy's latest in house RadHaz Survey did not satisfy the Navy's commitments.

The December 2000 RADHAZ Report states "RADHAZ measurements were conducted with operational constraints in effect as defined within the current established SWEF standard operating procedures. Nowhere in the report is the source document identified for the "current" standard. The alterations are not listed but our review shows they are numerous. Peak and average power and antenna bearings for several devices are not consistent with the baseline the Navy provided to the Expert Panel and the Commission.

The December 2000 Report asserts "There are no hazards to ships transiting the [harbor] channel or to any ship at-sea." This is based on an assumption that vessels come no closer than 650 ft. to the emitters. Four of the five expert panel members found that persons on tall vessels transiting the harbor could be exposed to RF radiation even in excess of DoD exposure limits. There is no indication that the Panel Report was seen or considered by the Navy agency that prepared the 12/00 RADHAZ Report.

The 12/2000 RADHAZ Report evaluates compliance only with the DoD (IEEE) radiation exposure standard. However, this Report includes the attached Table 2 [Exhibit 15] containing calculation of exposure levels at the mid-point of the shipping channel that greatly exceed the more protective FCC standard for the uncontrolled environment. The FCC standard is an exposure level not to exceed 1.0 and Table 2 reports four emitters in excess of that level.

The 12/00 RADHAZ Report exhibits the lack of objectivity that concerned the Commission when it adopted its Findings of May 9, 2001, and violates the Navy commitment to provide a comprehensive report. One substantive contribution and new

issue raised by the December 2000 RADHAZ Report is its measurement data (Table 2) disclosing violation of the FCC radiation standard in the uncontrolled environment of the coastal zone.

Navy Comments. The Navy submitted a new RadHaz survey dated December 2000, which included (1) doubling the measurement points taken in public (uncontrolled) areas; and (2) "translating" the survey results into plain English. The Navy also appointed an information officer to answer any questions about the surveys. The Navy letter dated January 22, 2001, provided the official report from the enhanced RADHAZ survey and an executive summary. This report verified the SWEF operation are safe and that there are no RF hazards to personnel in the Controlled environment, or in the environment that the general populace has access to.

Commission staff analysis. The Navy complied with its commitment to undertake an expanded Radhaz survey (December 2000), which included doubling the measurement points taken in uncontrolled areas and providing a "plain English" summary of the survey results. The Navy also appointed an information officer as promised. The Beacon Foundation is concerned that the survey report did not specifically mention the transiting ships concern expressed by the Commission and the expert panel, and, therefore, it concludes that the survey "lacks objectivity." The Beacon Foundation is also concerned that a table from the survey shows RF levels > 1 mW/cm^2 (the FCC guideline) from several radars within the shipping channel (Exhibit 15). The Commission staff believes this information simply confirms that the expert panel members' concerns were justified, and that there is a potential hazard to persons on board tall ships that could be exposed. If the Navy continues to cease operating these radars when ships are present, the potential hazard disappears. The Navy had committed to providing sufficient information in its survey to enable the Commission or another reviewer to determine whether the FCC guideline were exceeded in any uncontrolled areas, and the Navy has complied with this commitment. The issue of the objectivity of the survey itself is not relevant, as long as the survey provides the data needed for an independent reviewer to measure the documented survey results against the existing standards and guidelines. Therefore the Navy has complied with this commitment.

Navy Commitment 3. The Navy will appoint a RF Safety Officer to ensure continued compliance with required safety measures and regulations.

Beacon Foundation comments. The Navy sidesteps its verification commitment with a statement that SWEF operations "… are in compliance with established Navy policies governing operations at the SWEF complex." The statement that was provided omits the promised verification that all "operational modifications agreed to as a result of the informal mediation and all safety measures are being followed."

We know from the July 24, 2001, Navy memorandum to the Commission that modifications agreed to including the baseline given to the panel, and dimensions and means of activating a ship exclusion zone, are not in the present SOP. This new knowledge reveals the February 9,

2001, letter to be an empty certification only, and that the Navy is operating as it wishes without regard to the modifications it committed to the Commission in the mediation.

Navy comments. The Navy appointed a RF Safety Officer. The Navy's February 9, 2001, letter to the Commission contained the RF Safety Officer's certification that the SWEF emitters were operated in compliance with the SOPs, the DoD guidelines and all other operational enhancements agreed to as a result of the informal mediation between the Navy and the Commission. In addition, in response to the Commission staff's request, the Navy's Radiation Safety Office will ensure the exact language agreed to during the April 2000 public hearing will be used in the safety certification in future annual reports.
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Commission staff analysis. The Commission staff believes The Beacon Foundation is assuming a conflict exists which may instead be a question of semantics. In any event, the Navy has agreed that future safety certifications will avoid potential misinterpretation by following the commitment exactly as previously stated. The Navy has complied and will comply with this commitment.

Navy Commitment 4. The Navy will submit annual reports to the Commission, no later than January 31 each year, indicating: (1) the total number of hours the radars radiated out of the antennas; (2) the number of times radiation was halted due to ships or roosting birds; (3) the number of aircraft events flown off the Sea Range; (4) verification that all operational modifications agreed to as a result of the informal mediation had been followed; and (5) verification that the facility continues to be operated in compliance with safety measures.

Beacon Foundation comments. The Navy's annual report (Exhibit 16) withholds information needed to determine compliance with the Navy's commitments. It contains an assortment of mostly handwritten pages indicating only the times when each device was "on." For all but two of the emitters no further information was provided. Mere on/off data is useless in evaluating Navy adherence to the operating baseline it had promised the Commission and is contrary to the Navy commitment to provide detailed "equipment operational logs." Data obviously needed but withheld includes actual emission sectors radiated (i.e. both bearing and antenna elevation), the actual power level used, and the frequency (except where classified).

In a further communication to the Commission of July 24, 2001, the Navy provides a report form it proposes to initiate with its 2001 annual report. This too would continue to withhold equipment operational log data.

The Navy's annual report and its subsequent communications of May 8 and July 24, 2001, "demonstrate that the Navy never intended to fulfill its commitment to the Commission for an annual report."

As detailed in our April 27, 2001, letter, the revealed facts show operations outside bearing restrictions and at higher power than the baseline the Navy represented to the Expert Panel and to the Commission. In Navy comments of May 8, 2001, the violations we identified are dismissed with a Navy warning that looking at the logs without access to analysis by the Navy Safety officer "may lead the reader to erroneous conclusions." The Navy now states that the report entries indicating bearing of operations outside the baseline limits was in one instance a special test and in the other a "clerical error." The Navy does not deny power levels in excess of the baseline for the one device. The Navy suddenly admits these excesses, and drops on the Commission 13 pages of additional changes it has unilaterally made to the baseline at undisclosed times in the past.

The Navy never intended to be bound by the baseline it represented to the Expert Panel and the Commission. That baseline, created for the mediation, includes greater restraints than those the Navy applies to actual operations.

Navy comments. The Navy submitted an annual report dated February 2, 2001, including a Summary Matrix of SWEF Radiate times for calendar year 2000. That summary includes radar radiate times and the number of times operations were interrupted due to ships transiting the tall ship exclusion zone and for roosting birds. That letter also provided the "raw" radar logs. A subsequent Navy letter dated February 9, 2001, provided information on the number of aircraft events flown off the Sea Range and a Safety Compliance verification of SWEF operations by the Navy RF safety officer.

The Summary Matrix provides the total duration for each system for all events during 2000 when the SWEF emitters were used. This matrix documents the durations of the use of SWEF emitters and shows that the emitters were operated in compliance with the Standard Operating Procedures identified in the Consistency Determination. The data found in the logs must be read in conjunction with the analysis provided by the RF safety officer and should not be solely relied upon to verify the annual use of emitters at SWEF. Reviewing the logs without the benefit of the RF Safety Officer's analysis may lead the reader to erroneous conclusions. For example, in the case of power levels equipment calibration, where in the system the measurement was taken, the measurement type (peak or RMS), as well as many other factors can greatly influence the meaning of any hand written notations. The Summary Matrix contains all information required to analyze SWEF operations. The Navy intended the Commission to view the Summary Matrix as our record of file.

In response to the Commission staff's request for additional information, on July 24, 2001, the Navy provided the Commission staff with additional analysis and information. In it the Navy acknowledges that its log/record collection system could be improved and better communicated, and that "reporting changes to the technical parameters of the SWEF radars need to be provided in a single report that explains the changes relative to the technical parameters reviewed by the Technical Panel."

The Navy also proposed a more concise log entry system, and responded to allegations that certain radar systems were operated at greater power levels than originally agreed to.

The questions presented by The Beacon Foundation and those expressed by the Commission staff indicate that the Navy could have better explained the relationship between the power levels reviewed by the Technical Panel and the operational limits defined in the Environmental Assessment (EA). It has also become clear that the raw RF logs are confusing and difficult to interrupt without supplemental information from the Radiation Safety Officer (RSO). In an effort to better explain the data previously provided and to improve future data submissions, the following information is provided.

In response to the concerns expressed regarding the operational logs, the Navy has developed a standard form (Exhibit 12) that will replace the raw operational logs for all systems. This new form will also facilitate the submission of a clear concise annual report for 2001. The Navy also recognizes that reporting changes to the technical parameters of the SWEF radars need to be provided in a single report that explains the changes relative to the technical parameters reviewed by the Technical Panel. The Navy has submitted a sample of this new chart, containing information that explains changes to the SWEF radars since the technical panel review is also provided (Exhibit 13). This chart will also become part of the Navy's annual report in 2001.

In response to the Commission staff's request, the Navy will include the power levels and elevations for the SWEF emitters in the annual logs in all future annual reports. The annual log sheets will be modified to include this information. We are targeting 1 September for implementation of the revised log sheets.

Commission staff analysis. The Commission staff agrees with The Beacon Foundation's statement that the Navy's first (2000) annual report was inadequate. This annual report contained too little information and did not provide power levels and radiated sectors for most of the radars. In addition, where power levels and radiated sectors were provided, on several occasions some of the radars appeared to exceed the baseline levels or sectors previously agreed to. In response to the Commission staff's request, the Navy acknowledged that the report was insufficient, and the Navy subsequently provided additional information and analysis interpreting the first year's operations, as well as made commitments to improve future annual reports, including providing power levels and radiated sectors for all radars. The Commission staff believes these improvements to future annual reports will satisfy the Navy's commitment.

The issue of deviation from baseline conditions reviewed by the Commission and the expert review panel is further discussed in the next section.

Navy Commitment 5. For its analysis of future changes, as the Navy has agreed (see Appendix B [Exhibits 2-3]), **the Commission staff will rely for its baseline description and level of impacts on the Navy's "Technical Parameters for SWEF emitters," dated February 18, 2000**, which was the baseline relied upon by the expert panel, as well as the "to scale" map submitted by the Navy to the panel dated January 13, 2000.

The Navy will coordinate radar modifications at the SWEF with the Commission staff, including, where appropriate, submittal of future consistency or negative determinations for operational or equipment changes at the facility.

Beacon Foundation comments. The MK 74 Mod 6/8 and MK 86 SPG 60 radar levels reported on Navy radar logs exceeded commitments on "baseline" limits, the first in terms of angular bearing and the second in terms of peak power levels emitted. In addition, information provided by the Navy in response to a Freedom of Information Act (FOIA) request (Exhibit 7) shows the Navy is not using the agreed-upon baseline as its standard operating procedures (SOPs). The Navy is only agreeing to show that its operations comply with the higher SOPs, instead of the lower levels relied upon by the panel members during the mediation and expert panel review process.

The Navy abruptly drops any pretense that the baseline given to the Expert Panel is the control document or that its greater restrictions are necessarily included in the SOP. It suddenly provides 13 pages of unilateral and undated changes to its SOP and acknowledges its actual SOP is different and uncontrolled by the baseline it represented to the Expert Panel and the Commission.

We particularly note that the changes for the MK 74 Mod 6/8 now state it may operate in CWI mode at any power at a +5 degree elevation – just as in the 1999 SOP, and contrary to the baseline it represented to the Expert Panel and the Commission.

The Expert Panel and the Commission relied on Navy assurances that SWEF operations comply with the baseline the Navy provided for the mediation process. The July 24, 2001, Navy communication repudiates the assurances and its commitment to observe the restrictions contained in the mediation baseline.

Navy comments. The Navy has responded to the concern that certain radar systems were operated at greater power levels than originally agreed to.

Concerning the Standard Operations Procedures (SOPs), the Navy previously revised the internal (SOP) for radar systems to include agreed upon parameters. This SOP will be formally reissued with all of these changes incorporated on a standard schedule. Until that formal reissuance, the operators are trained to refer to "change pages." Unfortunately, when The Beacon Foundation submitted its Freedom of Information Act (FOIA) request, it requested

a specific instruction by number and the Navy neglected to include the supplemental page changes. Copies of these pages were sent to The Beacon Foundation when the Navy discovered this oversight.

Concerning whether the MK 74 radar operated outside of transmission sectors (two occurrences noted in the annual report), the Navy states that as with all radars at SWEF, during normal operation the MK 74 radar is operated within the operational parameters of the Standard Operating Procedures (SOP). The only instance where the MK 74 radar was operated outside of the SOP parameters occurred on October 3, 2000, in order to accomplish the objective of the enhanced RADHAZ survey. The enhanced RADHAZ survey required measurement of the mainbeam power density of all SWEF radars. Because of the elevation, location on the building, and proximity of the water, the RADHAZ test engineers were unable to safely reach the mainbeam on the MK 74 with the test equipment to measure its power density. In order to collect these data safely, the RSO authorized the test engineers to temporarily adjust the transmission sector to establish line-of-site with a tower within SWEF complex where the test equipment was placed. The RSO supervised the test to ensure that no people, ships, or birds were exposed to the RF from this radar. At the completion of this test on October 3rd, the equipment was immediately reconfigured to the parameters in the Standard Operating Procedures (SOP).

The other instance (of excess power levels) cited was an annotation error in the raw log. The RSO has verified the employee entering the data in the logbook copied values recorded in the log by the last event. This previous event was the Enhanced RADHAZ Survey measurement taken on October 3, 2000. This was simply clerical error and does not represent the transmission sector on that day.

The Navy has also responded to concerns that: (1) the annual report handwritten page for the AN/SPG-60 and SPQ-9A showing entries for peak power in excessive of those provided to the Technical Panel; and (2) the MK 92 CAS Track power level provided in the December 2000 baseline RADHAZ report shown different than that provided in the Technical Parameters Table provided to the Technical Panel for this system.

The Navy states that the SOP for the SWEF radars provides the operational parameters which are consistent with the operational limitations documented in the EA and the Consistency Determination. Through the National Environmental Policy Act (NEPA) process, the Navy evaluated the potential environmental impact from implementing the Virtual Test Capability (VTC) at SWEF. All aspects of the VTC including emitter power levels were evaluated and a Finding of No Significant Impact (FONSI) was issued. The enhanced RADHAZ Survey further verified SWEF emitter power levels were compliant with DoD guidelines for safe operations.

During the informal mediation process, the Navy provided the Technical Panel the technical parameters for all of the SWEF radars as they were measured at the time the table was developed (February 2000). The technical parameters of some of the radars have since

changed, but all are still well within the authorized limits. The radars continue to be operated with the same constraints in emission sectors, bearings, and elevations as reviewed by the Technical Panel. The radars with safe separation distances that extend beyond the fence line continue to be restricted to only radiate seaward or at high elevations not below the horizon. Radars with safe separation distances that extend into the shipping channel continue to be restricted to radiate at elevations 5 degrees above the horizon and are required to operate with elevations above 30 degrees while tall ships are present in the Tall Ship Exclusion Zone.

The enhanced RADHAZ survey report of December 2000 confirmed that the AN/SPQ-9A radars' safe separation distance is still within the Navy fence line and the safe separation distance for the AN/SPG-60 does not extend into the harbor shipping channel. The power levels for radars in RADHAZ tests may be lower than that previously reported in either earlier RADHAZ tests or the data provided to the Technical Panel. This is the result of equipment failures resulting in low power output during the test. In the case of the MK 92, an equipment failure at the time of the enhanced RADHAZ survey prevented the MK 92 from operating at its full-authorized power. Rather than delaying the tests and potentially missing the agreed upon timeline, the test was completed with the lower power levels for the MK 92. However, during the 1998 RADHAZ survey the MK 92 radar was tested at full power and authorized to operate at this power level. No changes have been made to the MK 92 that would have resulted in an increased in power level and therefore the earlier RADHAZ survey power level is still authorized.

It should also be noted that all of the changes to the SWEF radars' power levels in the uncontrolled areas are still below the FCC standards and within the limitations described in the EA.

The Navy welcomes the opportunity to provide any additional information that would help the Commission verify that the Navy has fulfilled its commitments to the Commission and plans to continue to work with the Commission staff to make certain that operations continue to be consistent with the enforceable policies of the Coastal Zone Management Program.

In response to the Commission staff’s subsequent request that the Commission be notified when the changes to the power levels take place (as opposed to only in annual reports), and whether changes to power levels are tested (and, if so, when), the Navy states that in addition to its January annual report, it will notify the Commission midyear (end of July) of any change that increases the safe separation distance of the radars. Safe separation distance more inclusive of potential safety concerns than just reporting changes in power. When any change is proposed that may affect the safe separation distance, the RSO performs an analysis and makes a recommendation with respect to a need for a RADHAZ survey. All of the analysis performed by the RSO is forwarded to SPAWAR for their comments and recommendations, prior to any action. In addition, a total site RADHAZ survey is conducted during the 5-year periodic cycle regardless of whether a RADHAZ survey is conducted for any specific change.

Concerning whether power changes were tested, the Navy states that the power level increase for one radar (the SPG-60) was not included in the December 2000 RADHAZ survey. The increase in power for the SPG-60 occurred after the RADHAZ survey was conducted but was subjected to a safety assessment by the RSO. The result of this assessment was that even though the safe separation distance increased, the radar with its bearing, elevation and tall ship exclusion zone restrictions is safe to operate considering both the Navy standard (IEEE standard) and the FCC guidelines. Also, the Navy will include a notation in the SWEF Technical Parameters Changes to the Baseline in all future annual reports indicating the date of all RADHAZ surveys conducted on SWEF emitters.

In response to the Commission staff's subsequent request for an explanation of the MK 74 radar power level change (the Expert Panel and the Commission were previously informed this equipment would not radiate out), the Navy states that this radar was not used to emit into space at the time of the mediation, but that "since that time we have tasking that requires radiation." This radar is restricted in bearing as well as elevation, precluding emission towards land. It is also restricted like the other restricted radars so that it observes the tall ship exclusion zone. Furthermore, this system has been subjected to two RADHAZ surveys at these power levels and with those restrictions is safe to operate considering both the Navy standard (IEEE standard) and the FCC guidelines.

Commission staff analysis. The Commission staff believes the Commission was clear in expressing its expectation that it would be informed when "changes from the baseline" were implemented. After several requests for more complete information, the Navy has provided a complete chart, which enables the Commission to measure current operations against the baseline. The Commission appreciates this "full disclosure"; however the Commission also believes this information should not have been provided "after-the-fact." It also should have been contained in the Navy's annual report, which, as discussed above, contained too little information with which to judge the Navy's compliance with its commitments. As the Navy understands, the Commission reserves the right to request a consistency or negative determination for any significant changes at the SWEF, and absent being informed of changes being made, which the Navy promised to do, the Commission cannot fulfill its obligation to monitor continuing effects of the SWEF activities on coastal resources. That the Navy is now willing to provide the Commission with a semi-annual rather than annual reporting of any changes made remains an inadequate fulfillment of the Navy's commitments to the Commission. The Navy needs to notify the Commission of increases in power levels and sectors of radiation, and give the Commission an opportunity to respond, and, if warranted, request additional information and analysis, *before* such changes are implemented.

At the same time, the Commission staff has reviewed the changes in power levels and emission sectors the Navy has now provided, and the Commission staff does not believe any of the modification from the baseline raise concerns about effects on coastal resources, *as long as the Navy continues its commitment to avoid exposure to large ships in the entrance channel*. The

Navy has provided explanations and quantification of changes from the baseline in its chart (Exhibit 13). Some of the changes resulted from more accurate measurements, and some are due to increases in power. The notable changes are as follows:

1. The MK 86 SPG 60 radar power level was doubled; however the increase in safe separation distance increased from 303 ft. to 361 ft. This 19% increase in safe separation distance is not particularly significant.

2. The MK 57 NSSMS Radars A & B power levels increased by 11%; however their safe separation distance decreased.

3. The MK 74 Mod 6/8 (Track mode) power increased 25%; however the safe separation distance increased only seven ft. (1.4%).

4. The MK74 Mod 6/8 CWI went from no external operation to a power level yielding a safe separation distance of 966 ft., which would be significant, but for the fact that this radar operates only straight up (i.e., is limited to 0 to 5 degrees from the vertical).

5. The MK 74 Mod 14 (Tartar SM-2NTU) - /CWI radar was re-measured, and its safe separation distance increased from 457 ft. to 530 ft. This 21% increase in safe separation distance is not particularly significant.

Exhibit 9 provides schematics for the radars at the SWEF (as originally reviewed by the Commission). For all of the changes and re-measurements discussed above, the staff believes the effects on coastal resources have not changed, assuming that the Navy continues to maintain its commitment to avoid exposure to large ships in the entrance channel.

In conclusion, the Navy stated in its most recent communication that it "…welcomes the opportunity to provide any additional information that would help…" the Commission verify that the Navy has fulfilled its commitments. The Navy's most recent chart represents the type of "full disclosure" the Commission had been led to believe would be forthcoming; at the same time, for this type of information to be meaningful it needs to be provided before changes are implemented, not after.

Navy Commitment 6. **The Navy will inform the Commission of any changes in DOD RF standards**, will comply with all federal regulations (including any adopted by EPA), and will describe how existing radars will be modified to comply with any changed regulations or standards.

Navy Compliance. None needed at this point.

BEACON Foundation comments. None.

Commission staff comments. To date, the Navy has complied with this commitment.

IV. COMMISSION STAFF CONCLUSIONS

As noted the procedures discussion (Section II above), the Commission's remedy for situations where a federal agency may deviate from its commitments is to seek federal agency cooperation to assure its activities continue to be consistent with the CCMP. The Navy has acknowledged its first annual report was incomplete, the Navy has provided additional information and response to specific Commission staff information requests, and the Navy has re-stated its intent to continue to cooperate with the Commission. The Navy states:

> *PHD NSWC [Port Hueneme Division, Naval Surface Warfare Center] welcomes the opportunity to provide any additional information that would help the California Coastal Commission (CCC) verify that the Navy has fulfilled its commitments to the CCC and plans to continue to work with CCC staff to make certain that operations continue to be consistent with the enforceable policies of the Coastal Zone Management Program.*

To fully cooperate with the Commission, the staff believes the Navy needs to "amend" and clarify its commitments to improve its record of compliance, including taking the following actions:

1. The Navy needs to notify the Commission of significant changes, especially in power levels and sectors of radiation (and analyze their implications for safe separation distances), and give the Commission an opportunity to respond to this information, and, if warranted, request additional information, analysis and/or federal consistency submittals, *before* such changes are implemented, rather than after-the-fact, and semi-annually, as currently agreed to by the Navy.

2. The Navy needs to clearly document that the Standard Operating Procedures (SOPs) and/or change pages reflect the Navy's commitment and instruct operators to cease operating when tall ships could be exposed to radars as committed.

3. As agreed to by the Navy, the Navy needs to enhance future annual reports, including providing power levels and emission sectors radiated for all radars, as well as an up-to-date chart (similar to Exhibit 13) showing power levels, emission sectors, and safe separation distances.

4. As agreed to by the Navy, the Navy needs to assure that the RF Safety Officer's certification indicates whether the Navy has complied with all the operational enhancements agreed to as a result of the informal mediation between the Navy and the Commission.

Finally, the staff has also attached four recently received letters, from the Navy, the Cities of Port Hueneme and Camarillo, and The Beacon Foundation (Exhibits 17-20).

V. EXHIBITS

1. SWEF location map
2. Navy commitments made as a response to expert panel recommendations
3. Navy letter (including additional commitments) in response to Commission objection dated April 13, 2000
4. The Beacon Foundation Letter dated April 27, 2001
5. The Beacon Foundation Letter dated May 18, 2001
6. The Beacon Foundation Letter dated July 28, 2001
7. Navy response to Environmental Defense Center "FOIA" request dated May 10, 2001
8. "Baseline" power levels for all radars
9. Radar schematics for radar systems MK 74 Mod 6/8, MK 86 SPG 60, MK 86 SPQ 9A, and MK 92 (CAS Track Mode).
10. Navy letter dated February 9, 2001, including Safety Compliance Verification
11. Navy email dated July 24, 2001
12. Proposed Revised Radar Log Sheet for future annual reports
13. SWEF Technical Parameter Changes to the Baseline, July 2001
14. Shipping Channel Exclusion Zone
15. Table 2, from December 2000 Radhaz Survey
16. Navy Annual Report, February 2, 2001
17. Navy letter dated September 28, 2001
18. City of Port Hueneme letter dated October 4, 2001
19. The Beacon Foundation Letter dated October 12, 2001
20. City of Camarillo letter dated October 10, 2001

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